Technical *Bulletin*

Subject: ANTI-LOCK SYSTEM – ROADWAY EXPRESS

Roadway Express is placing a fleet of tractors and trailers in service with Bendix Anti-Lock components.

The tractors are White Model RB-2 tandem axle with a trailing dead axle. The tractor Anti-Lock system is somewhat unique as follows:

Both axles of the tandem are controlled by a single MC-1 Anti-Lock assembly. The tag axle only is equipped with WS-1 hub mounted speed sensors.

The power supply is arranged so that there is a redundant source of power for the anti-lock through an air-operated switch. The air-operated switch is connected to the air source for the spring parking brake release. Consequently, if the parking brakes are released (by applying air pressure) the anti-lock system is powered up. It also receives power from the ignition switch. In either case, the anti-lock will self-check as it first receives power. To hear the air bursts of the self-check sequence, the service brakes should be applied first and then the ignition switch turned on or the parking brakes released. The anti-lock indicator lamp will light for two seconds and then go out and two short bursts of air will be heard from the anti-lock modulator.

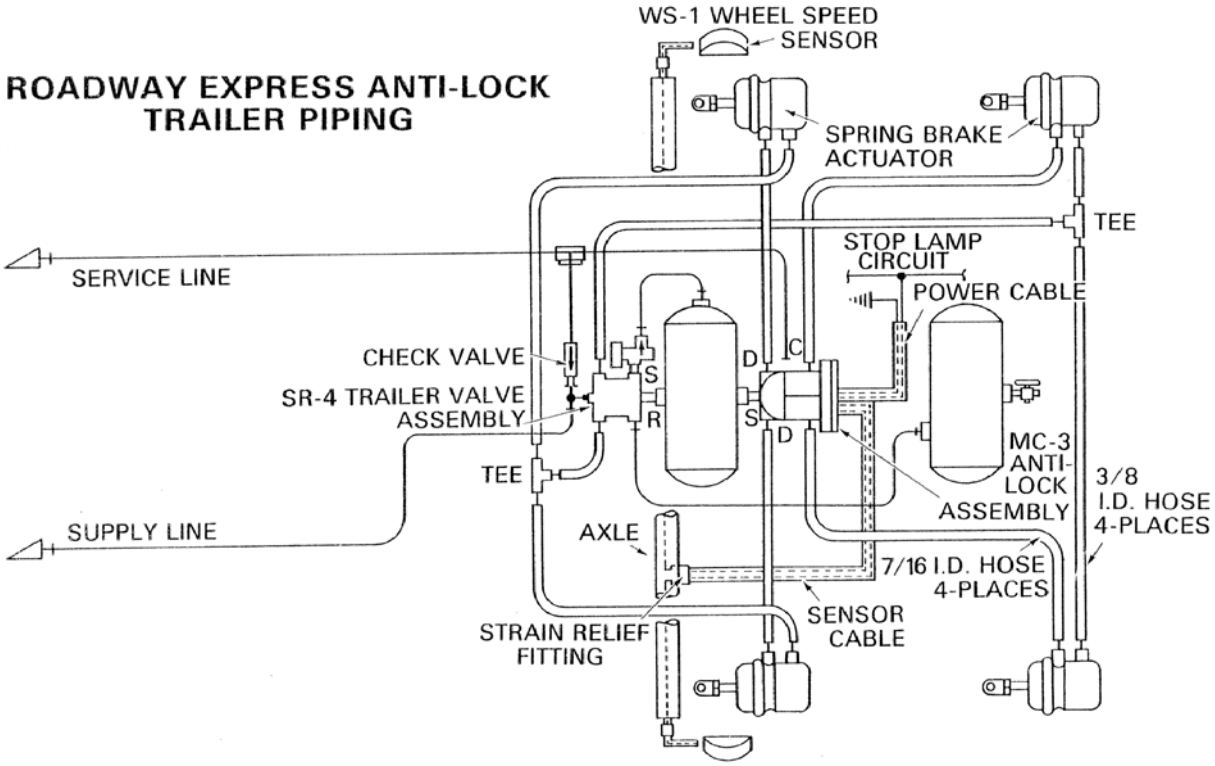
The White tractors also are equipped with a relay in the cab which will sense a loss of ground for the MC-1 or a severing of all three conductors running from cab to controller and light the indicator lamp. A simplified diagram of this circuit is shown in Fig. 1

The Roadway trailers are Budd and Monon and are equipped with MC-3 controller modulators with WS-1 speed sensors identical to those used on the tractor. The trailers do <u>not</u> have the optional indicator lamp; consequently, the only way the trailer anti-lock system can be checked for functional integrity is by a dynamic check and/or by checking the fuse in the MC-3.

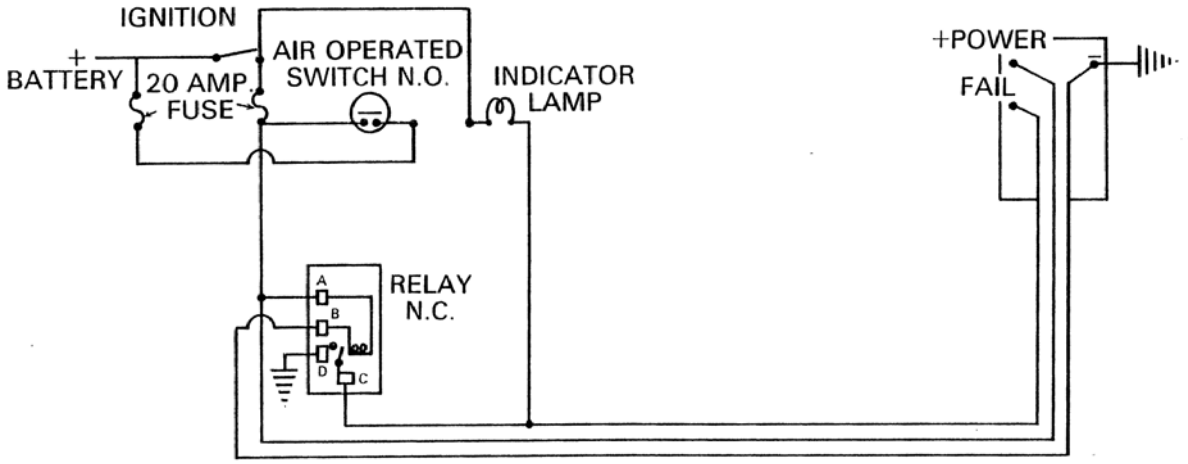
The Roadway trailers are also equipped with a Bendix two reservoir reduced volume pneumatic system using an SR-4 trailer supply valve. If any problems occur with the SR-4, care should be taken <u>not</u> to install the SR-2 by mistake. Only the SR-4 is designed for the reduced volume system. The primary difference between the SR-2 system and the SR-4 system is that the SR-2 requires separate reservoirs for service application and for spring brake hold-off, whereas the SR-4 uses both reservoirs for service application but either will retain air to hold the spring brakes in the release position in case of the loss of the other. This reduces the total reservoir volume required to meet “121” requirements. A schematic of the trailer piping is shown in Fig. 2.

A chart showing service piece numbers for servicing the various components is shown in Fig. 3.

ROADWAY EXPRESS ANTI-LOCK TRAILER PIPING



ROADWAY EXPRESS ANTI-LOCK WIRING DIAGRAM



N.O. - NORMALLY OPEN
N.C. - NORMALLY CLOSED

SERVICE PIECE NUMBERS

ROADWAY FLEET

		Tractor	Trailer
Complete Controller-Modulator		MC-1 - 289252	MC-3 – 288473
Controller		EC-1 - 289359	EC-3 – 288475
Modulator		M-6 - 289614	M-7 – 288673
Repair Kit		289277	289277
Solenoid Kit		289278	289278
Cable, Speed Sensor		101315	289977
WS-1 Speed Sensor		101123	288600
*	Hub Cap Assembly	288601	288601
*	Flange	291963	291963
*	Fill Cap	291964	291964
*	Stator Spring	291974	291974
*	Spring Retainer	291975	291975
*	Bearing Cap	291978	291978
*	Retaining Ring	293147	293147
Cable, Power			101150
Strain Relief Fitting			289980
Check Valve			229603

Fig. 3

*These are contained in the WS-1